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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,577	09/26/2003	Walter E. Donovan	NVDA P000848	8641

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EXAMINER

AZARIAN, SEYED H

ART UNIT	PAPER NUMBER
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2624

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/02/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/672,577

Applicant(s)

DONOVAN ET AL.

Examiner

Seyed Azarian

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10672577.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

2. Claims 1-20 rejected under 35 U.S.C. 102(e) as being anticipated by Kilgariff et Al (U.S. patent 6,850,243).

The applied reference has a common assignee with the instant application.

Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding claim 1, Kilgariff discloses a method of computing a biased ratio value for anisotropic texture map filtering, comprising (see Fig. 31, 33 and 34, column 4, lines 7-14 parameter (bias) used in the calculation Anisotropic area in texture space);

receiving a ratio value for a texture map (column 13, lines 20, anisotropic slope and anisotropic ratio);

applying a bias to the ratio value to produce the biased ratio value, and determining a number of texture samples to filter based on the biased ratio value (column 13, lines 13-26, the unit additionally generates scale S and T addresses per the calculated LOD and programmed LOD bias, also neighborhoods are generated for multiple clocks to perform trilinear, anisotropic and percentage passed filtering).

Regarding claim 2, Kilgariff discloses the method of claim 1, wherein the applying comprises scaling the ratio value by the bias summed with one to produce the biased ratio value (column 17, table 4, number texture in linear order).

Regarding claim 3, Kilgariff discloses the method of claim 2, wherein the applying further comprises clamping the biased ratio value to a number less than or equal to one (column 29, line 66 through column 30, line 14, refer to biased ratio).

Regarding claim 4, Kilgariff discloses the method of claim 2, wherein the bias is programmed (column 2, lines 55-64, computer program product are provided (fetched from memory)).

Regarding claim 5, Kilgariff discloses the method of claim 2, wherein the bias is determined by a software driver (Fig. 201, column 8, lines 65-66, refer to software).

Regarding claim 6, Kilgariff discloses the method of claim 2, wherein the bias ranges from 0 to 15/16 (column 50, lines 52-58).

Regarding claim 7, Kilgariff discloses the method of claim 1, further comprising determining the bias based on a performance mode selected by a user (Fig. 1, column 9, lines 50-59, user interface).

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Regarding claim 8, Kilgariff discloses the method of claim 1, further comprising performing trilinear filtering when the biased ratio value is greater than or equal to one (column 30, lines 10-13, trilinear filtering).

Regarding claim 9, Kilgariff discloses the method of claim 1, further comprising performing anisotropic filtering when the biased ratio value is less than one (column 30, 2-7, the scalefactors equals one).

Regarding claim 11, Kilgariff discloses the method of claim 10, wherein the bias corresponds to a texture identifier (see claim 1, also column 2, lines 43-54, and column 4, lines 7-14 parameter (bias) used in the calculation Anisotropic area in texture space).

Regarding claim 12, Kilgariff discloses the method of claim 10, wherein the bias is programmed (column 2, lines 55-64, computer program product are provided (fetched from memory)).

Regarding claim 14, Kilgariff discloses the method of claim 10, further comprising clamping the biased ratio value to one when the biased ratio value is greater than one (column 30, lines 10-13, trilinear filtering).

Regarding claim 16, Kilgariff discloses a programmable graphics processor for generating images using anisotropically filtered texture samples, comprising: a texture unit configured to receive texture parameters and compute a filtered texture sample, the texture unit including an anisotropic optimization unit configured to compute a biased ratio value indicating a number of texture samples to anisotropically filter (see claim 1, also column 111, lines 9-25, texture sampling computer program product for use in a graphics).

Regarding claim 17, Kilgariff discloses the programmable graphics processor of claim 16, further comprising an address computation unit configured to determine one or more read addresses using at least a portion of the texture parameters and the biased ratio value (column 2, lines 55-64, computer program product are provided for calculating a pixel color based on texture address mapping, texels are fetched from memory).

Regarding claim 19, Kilgariff discloses the programmable graphics processor of claim 16, wherein the anisotropic optimization unit includes a storage element configured to store one or more biases (see claim 17, also column 29, lines 65 through column 30, line 14, refer to biased ratio).

Regarding claim 20, Kilgariff discloses the programmable graphics processor of claim 16, wherein the anisotropic optimization unit includes a storage element configured as a lookup table (column 29, lines 65-68, the Anisotropic lookup table).

With regard to claims 10, 13, 15 and 18, the arguments analogous to those presented above for claims 1, 2, 3 and 17 are respectively applicable to claims 10, 13, 15 and 18.

Other prior art cited

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

(U.S. patent 6,919,904) to Kilgariff is cited for over bright evaluator system and method.

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(U.S. patent 6,040,837) to Wong et al is cited for method and apparatus for space variable texture filtering.

(U.S. patent 6,707,458) to Leather et al is cited for method and apparatus for texture tiling in a graphic system.

(U.S. patent 6,252,608) to Snyder et al is cited for method and system for improving shadowing in a graphics rendering system.

Contact Information

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seyed Azarian whose telephone number is (571) 272-7443. The examiner can normally be reached on Monday through Thursday from 6:00 a.m. to 7:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella, can be reached at (571) 272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application information Retrieval (PAIR) system. Status information for published application may be obtained from either Private PAIR or Public PAIR. Status information about the PAIR system, see [http:// pair-direct.uspto.gov](http://pair-direct.uspto.gov). Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Seyed Azarian
Patent Examiner
Group Art Unit 2624
January 30, 2007

